AMENDMENTS TO THE CLAIMS

The following listing of claims will replace all prior versions and listings of claims in the application.

LISTING OF CLAIMS

1. (Currently Amended) A semiconductor device, comprising:

a semiconductor region[[,]] in which an impurity of one conductivity type is doped;

a gate insulation layer[[,]] formed on the semiconductor region;

a gate electrode[[,]] formed on the gate insulation layer;

a lightly doped layer, formed in a region from ~~the~~ a principal surface of the semiconductor region to a first depth of the semiconductor region, in which a first impurity of ~~the~~ another conductivity type is implanted into the semiconductor region with a first dose amount; and

a heavily doped layer, formed in a region from the principal surface of the semiconductor region to a second depth, ~~which is shallower than the first depth,~~ in which a second impurity of the another conductivity type is implanted into the semiconductor region with a second dose amount in a range of the first dose amount or more to 1 x 10[[E]]^{15}/cm^2 or less;

wherein the second depth is less than the first depth.

2. (Currently Amended) A semiconductor device, comprising:

a semiconductor region[[,]] in which an impurity of one conductivity type is doped;

a gate insulation layer[[,]] formed on the semiconductor region;

a gate electrode[[,]] formed on the gate insulation layer;

a lightly doped layer, formed in a region from ~~the~~ a principal surface of the semiconductor region to a first depth of the semiconductor region, in which a first impurity of ~~the~~ another conductivity type is implanted into the semiconductor region with a first dose amount; and

a heavily doped layer, formed in ~~the~~ a depth direction from the principal surface of the semiconductor region, in which a second impurity of the another conductivity type is implanted into the semiconductor region with a second dose amount so that a peak position of ~~the~~ a concentration of the second impurity exists at a second depth position, ~~which is~~ the second depth position being ~~shallower~~ less than the first depth by 0.15 μm or more.

3. (Currently Amended) A semiconductor device, comprising:

a semiconductor region[[,]] in which an impurity of one conductivity type is doped;

a gate insulation layer[[,]] formed on the semiconductor region;

a gate electrode[[,]] formed on the gate insulation layer;

a lightly doped layer, formed in a region from ~~the~~ a principal surface of the semiconductor region to a first depth of the semiconductor region, in which a first impurity of ~~the~~ another conductivity type is implanted into the semiconductor region with a first dose amount; and

a heavily doped layer, formed in ~~the~~ a depth direction from the principal surface of the semiconductor region, in which a second impurity of ~~the~~ another conductivity type is implanted into the semiconductor region with a second dose amount in a range of the first dose amount or more to 1 x 10[[E]]^{15}/cm^2 or less so that a peak position of ~~the~~ a concentration of the second impurity exists at a second depth position, ~~which is shallower~~ the second depth position being less than the first depth by 0.15 μm or more.

4. (Currently Amended) The semiconductor device according to ~~any of~~ claim[[s]] 1 ~~through 3~~, wherein the one conductivity type is N-type and the another conductivity type is P-type.

5. (Currently Amended) The semiconductor device according to ~~any of~~ claim[[s]] 1 ~~through 3~~, wherein the second impurity is arsenic.

6. (Currently Amended) The semiconductor device according to ~~any of~~ claim[[s]] 1 ~~through 5~~, further comprising a trench structure that isolates the semiconductor region.

7. (Currently Amended) A method of manufacturing a semiconductor device, comprising:

forming a semiconductor region by doping an impurity of one conductivity type;

forming a gate insulation layer on the semiconductor region;

forming a gate electrode on the gate insulation layer,

forming a lightly doped layer in a region from ~~the~~ a principal surface of the semiconductor region to a first depth of the semiconductor region by implanting a first impurity of ~~the~~ another conductivity type into the semiconductor region with a first dose amount; and

forming a heavily doped layer in a region from the principal surface of the semiconductor region to a second depth, which is ~~shallower~~ less than the first depth, by implanting a second impurity of the another conductivity type into the semiconductor region with a second dose amount in a range of the first dose amount or more to 1 x 10[[E]]^{15}/cm^2 or less.

8. (Currently Amended) A method of manufacturing a semiconductor device, comprising:

forming a semiconductor region by doping an impurity of one conductivity type;

forming a gate insulation layer on the semiconductor region;

forming a gate electrode on the gate insulation layer;

forming a lightly doped layer in a region from ~~the~~ a principal surface to a first depth of the semiconductor region by implanting a first impurity of ~~the~~ another conductivity type into the semiconductor region with a first dose amount; and

forming a heavily doped layer in ~~the~~ a depth direction from the principal surface of the semiconductor region by implanting a second impurity of the another conductivity type into the semiconductor region with a second dose amount so that a peak position of ~~the~~ a concentration of the second impurity exists at a second depth position, ~~which is shallower~~ the second depth position being less than the first depth by 0.15 μm or more.

9. (Currently Amended) A method of manufacturing a semiconductor device, comprising:

forming a semiconductor region by doping an impurity of one conductivity type;

forming a gate insulation layer on the semiconductor region;

forming a gate electrode on the gate insulation layer;

forming a lightly doped layer in a region from ~~the~~ a principal surface to a first depth of the semiconductor region by implanting a first impurity of ~~the~~ another conductivity type into the semiconductor region with a first dose amount; and

forming a heavily doped layer in ~~the~~ a depth direction from the principal surface of the semiconductor region by implanting a second impurity of the another conductivity type into the semiconductor region with a second dose amount in a range of the first dose amount or more to 1 x 10[[E]]^{15}/cm^2 or less so that a peak position of ~~the~~ a concentration of the second impurity exists at a second depth position, ~~which is shallower~~ the second depth being less than the first depth by 0.15 μm or more.

10. (Currently Amended) A semiconductor device, comprising:

a semiconductor region[[,]] in which an impurity of one conductivity type is doped;

a gate insulation layer[[,]] formed on the semiconductor region;

a gate electrode[[,]] formed on the gate insulation layer; and

a heavily doped layer, formed by implanting a second impurity of ~~the~~ another conductivity type into the semiconductor region with a second dose amount of 1 x 10[[E]]^{15}/cm^2 or less.